

decrease post-war disablement of people greatly. Our experience in Chechnya points out that among the victims of war, the people who suffer most are those living in a war-ridden city. It's not possible for them to get transported to central clinics in case of a medical emergency, and the city hospital facilities don't meet the demands of a microsurgical unit. This is due to unavailability of equipment and personnel. Moreover, there is a constant necessity for the war-surgeons to work on a make-shift basis.

We have shown that microsurgery can be performed with a minimum of portable equipment. During our one month mission to Chechnya, we performed 17 microsurgical operations and 12 reconstructive procedures. All other procedures were successful. The post-op care of patients undergoing micro and reconstructive procedures on extremities is not as complex as those after surgery of internal organs of similar duration and extent. This justifies the performance of microsurgery in conditions of catastrophe.

#### Conclusions:

- 1) In today's catastrophe surgery practice, we should include a micro and reconstructive surgery team. This would help prevent post-catastrophe disablement;
- 2) Microsurgery can be performed effectively on a make-shift basis, even though the county hospital may lack the facilities; and
- 3) Modeling of a light-weight, portable, surgical microscope that could be used in the place of a stationary microscope, will be helpful for the catastrophe microsurgeon.

**Key Words:** children; microsurgery; wars

#### Session 7A: Miscellaneous

Chairpersons:

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#### The Tokyo Subway Sarin Attack from the Disaster Control Viewpoint

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St. Luke's International Hospital experienced the aftermath of the Tokyo Subway sarin attack. We investigated what prehospital care was provided and how St. Luke's Hospital dealt with this disaster from the viewpoint of disaster control. We divided problems into five categories: 1) Prehospital care; 2) Decontamination; 3) Accommodation; 4) Triage; and 5) Medical information transmission.

Because of legal restrictions in Japan, paramedics could not act effectively during the Tokyo Subway Sarin Attack. As a result, the immaturity of the Japanese prehospital care system was exposed. The law should be

improved. An emergency medical system suitable for ordinary times cannot be applied for disasters. Disaster management not only is a medical issue, but also a social issue involving government, regional communities, hospitals, and citizens. Disaster planning for hospitals and citizens that is more open must be established. Public organizations should have mobile facilities for mass casualty decontamination. This not only applies to disasters involving Chemical Warfare Agents, but also to chemical disasters and nuclear disasters. Gas masks also are necessary for prehospital treatment. One systematic stream from registration to treatment is the principle of disaster deployment at hospitals. Establishment of communications that are strong enough to endure disaster is necessary. Concentration of information at one place is dangerous and a weakness in a disaster.

**Key Words:** communications; decontamination; disaster control; emergency medical services (EMS); laws; Sarin

#### Information Disorder in Hospitals During the Tokyo Sarin Attack in 1995

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More than 5,000 people were affected by the terrorist attack with nerve gas on 20 March, 1995 in Tokyo. Since it was unprecedented and unexpected, there was a severe lack of relevant information during the initial several hours in the involved hospitals. We investigated 210 hospitals/clinics by employing a set of questionnaires about collecting/providing poison information at the event.

The terrorists attacked subway passengers at about 08:00 hours (h) and the name of poison, sarin, was announced officially on television at 11:00 h by the Chief of the Metropolitan Police. This television announcement was the first information of the poison name for 145 (73%) hospitals/clinics, although treatments for acute organophosphate poisoning already had been initiated in these facilities. Only 19 (9%) hospitals had available medical documents on sarin poisoning at the time of the event. In half of the hospitals to which more than 50 casualties were admitted, only a few cases of acute organophosphate poisoning had been experienced previously. A specific antidote, PAM was out of stock in 156 hospitals/clinics (74%).

A variety of organizations provided therapeutic information about sarin poisoning to 157 hospitals/clinics (75%), mainly by facsimile transmission. The most important provider was Japan Poison Information Center (JPIC), and the second was a number of medical colleges. 73 (35%) hospitals/clinics requested advice from JPIC on the day of the attack. However, its telephone lines were constantly busy for several hours after the event.

One of the painful lessons of this terrorist attack is that more specific and effective information systems for medical facilities are necessary in a chemical disaster,